DOCKET NO.: OMOR-0010 (Y03S012-PCT-US)
Application No.: 10/530,219
Office Action Dated: May 14, 2007

PATENT
REPLY FILED UNDER EXPEDITED
PROCEDURE PURSUANT TO
37 C.F.R. § 1.116

REMARKS

Applicants are

Claims 1 and 3, 4, and 6 to 15 are pending and rejected. More specifically,

- Claims 1, 3, 4, and 6 to 15 are newly rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing new matter;

- Claims 14 and 15 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite;

- Claims 1, 14, and 15 stand rejected under 35 U.S.C. § 102(b) as allegedly anticipated by EP-A1-1,152,362 ("Maeda");

- Claims 1, 3, 4, 7 to 10, 14, and 15 stand rejected under 35 U.S.C. § 102(b) as allegedly anticipated by EP-A2-1,288,868 ("Kawai");

- Claim 6 stands rejected under 35 U.S.C. § 103(a) as allegedly obvious over Kawai in view of US-A-5,619,630 ("Minami");

- Claims 11 and 12 stands rejected under 35 U.S.C. § 103(a) as allegedly obvious over Kawai in view of JP 2003-006245 ("Aragaki"); and

- Claim 13 stands rejected under 35 U.S.C. § 103(a) as allegedly obvious over Kawai in view of "Automatic Arrangement of Meta-Objects in Assembly Illustrations" ("Katsuma").

Applicants are herein amending claims 1, 3, 14, and 15. Applicants request reconsideration in light of the amendments and following remarks.

Telephonic Interview

The applicants wish to thank Examiner Schechtman for the courtesy extended in the telephonic interview conducted between him and Wendy Choi, applicants' attorney, on July 9, 2007, as well as the subsequent brief telephone discussion on August 29, 2007, to discuss the status of claims 1, 14, and 15.

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Applicants agreed to further amend claims 1, 14, and 15 to clarify that the user defines the parts list, thereby more clearly distinguishing the Maeda and Kawai references.

The Examiner and applicants' attorney also discussed the new matter rejection of claims 1, 2, 4, and 6 to 15 (using claims 1, 14, and 15 as representative claims) with respect to "assembly structure information." In reviewing the figures and the specification, the Examiner agreed that the phrase was supported and would withdraw the new matter rejection of claims 1, 14, and 15 and their dependent claims.

In an attempt to further clarify the language of the claim amendment -- an amendment which adds features that are believed to clearly distinguish the cited prior art based on the telephonic interview with the Examiner on July 9, 2007 -- and to explain support for these amendments, applicants are filing this supplemental response.

Claim Amendments

Applicants are herein amending claims 1, 3, 14, and 15:

More specifically, applicants are herein amending claims 1, 14, and 15 to clarify that *the user defines the parts list*. Support for these amendments may be found, *inter alia*, on page 7, lines 11 to 12, page 8, lines 4, and 16 to 18, and page 19, lines 7 to 10. For convenience, applicants have reproduced below (highlighting added) the full text of some of the paragraphs from the published application that provide specific support for this feature of the claim that is being specified in claims 1, 14, and 15:

> [0062]   Furthermore, this computer system generates a disassembly illustration shown in FIG. 1 from 3-dimensional graphic data and this disassembly algorithm. Thus according to the system of this embodiment, the **users can generate a illustration of disassembled blocks simply by creating a parts list**. In this embodiment, numbers are automatically assigned to each of the

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blocks in the order they appear in the parts list. In this manner, it is unnecessary to check for consistency between the parts list number and a reference numeral/symbol in the disassembly illustration.

[0066]   Meanwhile, components stored in the program storage unit 5 and relevant to the present invention are: a 3-dimensional data calling unit 12 for obtaining and storing in the memory the 3-dimensional graphic data file 8 from the data storage unit 6; a disassembly definition information generation unit 17 for generating and storing in the memory the disassembly definition information 11 **(parts list) for disassembling a product into parts based on user entries**; a disassembly algorithm generation unit 13 for generating and storing in the memory the disassembly algorithm 9 of the product into parts according to the disassembly definition information 11; a disassembly animation generation unit 14 for generating and outputting the disassembly animation 10 of the product parts according to the disassembly algorithm 9; a disassembly animation modification unit 15 for modifying the disassembly algorithm 9 and instructing the disassembly animation generation unit 14 to re-generate the disassembly animation 10 after the animation is generated; a disassembly animation replay control unit 16 for controlling to replay the disassembly animation; a reference numeral/symbol assignment unit 19 for assigning a reference numeral/symbol to each parts group of the disassembly definition information; and a disassembly illustration generation unit 20 for generating a disassembly illustration assigned with the reference numeral/symbol according to the disassembly algorithm 9.

[0067]   Here, **information received from the user** in the disassembly definition information generation unit 17 **is definition information of dependency relationships among parts and group relationships among groups**. Also, the disassembly definition information 11 (parts list) generated in this disassembly definition information generation unit 17 comprises a tree structure consisting of "nodes" and "leaves", which are processes and parts, respectively, as discussed in more detail below. In addition, each of these nodes comprises a "basic process" and an "intermediate process" performed in the basic process, and each of the leaves consists of a "process parts group" for grouping a plurality of parts or parts groups, and each of the parts or parts groups.

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Applicants are herein amending claims 1, 3, 14, and 15 to correct typographical errors with respect to "a" in claim 1 and "consisting of" or "consists of" in claims 3, 14, and 15. No new matter is introduced by the amendment to the claims.

Applicants request the entry of the amendment under 37 C.F.R. § 1.116(b) because the amendments to the claims either cancel claims, comply with requirements of form expressly set forth in a previous Office Action, or present the rejected claims in better form for consideration on appeal.

Rejection under 35 U.S.C. § 112, first paragraph

Claims 1, 3, 4, and 6 to 15 are newly rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing new matter. During the telephonic interview, the Examiner and applicants' attorney discussed the new matter rejection of claims 1, 2, 4, and 6 to 15 (using claims 1, 14, and 15 as representative claims) with respect to "assembly structure information." In reviewing the figures and the specification, the Examiner agreed that the phrase was supported and would withdraw the new matter rejection of claims 1, 14, and 15 and their dependent claims. The Examiner's interview summary indicates that the new matter rejection has been withdrawn.

Rejection under 35 U.S.C. § 112, second paragraph

Claims 14 and 15 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Applicants are herein amending 14, and 15 to correct the typographical errors with "consisting of" that were the basis of the indefiniteness rejection. Accordingly, applicants submit that claims 14 and 15, as amended, are definite under 35 U.S.C. § 112, second paragraph, and therefore request withdrawal of the rejection.

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Rejections under 35 U.S.C. § 102(b)

EP-A1-1,152,362 ("Maeda")

Claims 1, 14, and 15 are rejected under 35 U.S.C. § 102(b) as allegedly anticipated by EP-A1-1,152,362 ("Maeda"). Applicants traverse the rejection because Maeda fails to disclose, teach, or suggest, *inter alia*, a step where **a user defines a parts list** (disassembly definition information), as more clearly specified in amended claims 1, 14, and 15.

More specifically, in the present invention, 3-dimensional information (assembly structure information of a product) is imported, which is **used by a user to define a parts list**. Each parts list has fully corresponding disassembly definition information. For example, Figure 8F is an example of a parts list, and Figures 8A to C show different displays of essentially same disassembly definition information that corresponds to Figure 8F. If the disassembly definition information is changed, then the illustration generated based on the information is also altered accordingly. This disassembly definition information (part list) defines the processes of disassembling/assembling and parts that constitute the processes and their display (illustration) attributes.

Maeda discloses the use of an **existing** parts list and 2-dimensional image data of parts of a product in different disassembled states for generating a parts catalog (See, for instance, Paragraph [0250]). For example, Figure 10 show an illustration of parts with reference numbers and a parts list, however, the illustration itself is not created in Maeda's method, therefore, the illustration shown in Figure 10 can be searched, but no alteration can be made to the illustration itself. Whereas in the present claimed invention, illustrations are generated according to a disassembly algorithm, which is generated based on a **part list (disassembly definition information) defined by a user**. Therefore, different illustrations can be created for each part or partially assembled parts. Maeda does not disclose, teach, or suggest such

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disassembly definition information or the use of 3-dimentional data to generate these illustrations.

In Maeda, parts have numbers that have been assigned on them; however, neither the order of their appearance (*e.g.,* top to bottom) nor the reference numbers constitutes any order in actual assembling or disassembling. "Disassembly definition information" as used in the pending claims is ***user-defined processes*** that define the order of assembling/disassembling, and each process (node) is a basic unit of process animation, where attributes of each animation section is defined.

The main difference between the claimed invention and Maeda is that the claimed invention provides a ***user full control*** for the creating of process trees from assembly structure data of a given product, which is entirely distinct from the original assembly structure data. On the other hand, Maeda's process is bound to the original parts list and 2-dimensional image data of parts of a product in different disassembled states for generating a parts catalog. The claimed invention is, thus, distinct from and provides advantages over Maeda because it is not bound to an existing parts list, but it allows users to create the most appropriate parts list (disassembly definition information) and 3-dimensional data (assembly structure information).

Since Maeda does not disclose each and every element of the claims either explicitly or inherently, Maeda does not anticipate claims 1, 14, and 15. Accordingly, applicants request withdrawal of the rejection under 35 U.S.C. § 102(b) over Maeda.

EP-A2-1,288,868 ("Kawai")

Claims 1, 3, 4, 7 to 10, 14, and 15 are rejected under 35 U.S.C. § 102(b) as allegedly anticipated by EP-A2-1,288,868 ("Kawai"). Applicants traverse the rejection because Kawai

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fails to disclose, teach, or suggest, *inter alia*, a step where *a user defines a parts list* (disassembly definition information).

The method disclosed in Kawai imports assembly structure information, and illustrations of disassembled parts are generated based on "disassembling condition data." Kawai does not disclose, teach, or suggest the creation of process trees (disassembly definition information) in which a user defines the order and direction of disassembling/assembling among other things. In the present claimed invention, illustrations are generated according to a disassembly algorithm, which is generated based on a *part list (disassembly definition information) defined by a user*. Therefore, different illustrations can be created for each part or partially assembled parts. Kawai does not disclose, teach, or suggest such disassembly definition information.

In Kawai, parts have numbers that have been assigned on them; however, neither the order of their appearance (*e.g.,* top to bottom) nor the reference numbers constitutes any order in actual assembling or disassembling. "Disassembly definition information" as used in the pending claims is *user-defined processes* that define the order of assembling/disassembling, and each process (node) is a basic unit of process animation, where attributes of each animation section is defined.

Since Kawai does not disclose each and every element of the claims either explicitly or inherently, Kawai does not anticipate claims 1, 3, 4, 7 to 10, 14, and 15. Accordingly, applicants request withdrawal of the rejection under 35 U.S.C. § 102(b) over Kawai.

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Rejections under 35 U.S.C. § 103(a)

Kawai in view of US-A-5,619,630 ("Minami")

Claim 6 is rejected under 35 U.S.C. § 103(a) as allegedly obvious over Kawai as applied to claims 1 to 5, 7 to 10, 14, and 15 in view of US-A-5,619,630 ("Minami"). Applicants traverse the rejection because Minami does not supply the required limitations missing from Kawai. Thus, even if it were obvious to modify the Kawai method in the manner urged by the Office (and applicants are not conceding that it would have been obvious to do so), one would still not have obtained applicants' claimed method. More specifically, Minami does not supply the creation of process trees (disassembly definition information) in which a user defines the order and direction of disassembling/assembling among other things.

Based on the foregoing reason, the combination does not render claim 6 obvious. Accordingly, applicants request withdrawal of the rejection of claim 6 under 35 U.S.C. § 103(a) over Kawai in view of Minami.

Kawai in view of JP 2003-006245 ("Aragaki")

Claims 11 and 12 are rejected under 35 U.S.C. § 103(a) as allegedly obvious over Kawai as applied to claims 1 to 5, 7 to 10, 14, and 15 in view of JP 2003-006245 ("Aragaki"). Applicants traverse the rejection because Aragaki does not supply the required limitations missing from Kawai. Thus, even if it were obvious to modify the Kawai method in the manner urged by the Office (and applicants are not conceding that it would have been obvious to do so), one would still not have obtained applicants' claimed method. More specifically, Aragaki does not supply, *inter alia*, the creation of process trees (disassembly definition information) in which a user defines the order and direction of disassembling/assembling among other things.

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Based on the foregoing reason, the combination does not render claims 11 and 12 obvious. Accordingly, applicants request withdrawal of the rejection of claims 11 and 12 under 35 U.S.C. § 103(a) over Kawai in view of Aragaki.

Kawai in view of Katsuma

Claim 13 stands rejected under 35 U.S.C. § 103(a) as allegedly obvious over Kawai in view of "Automatic Arrangement of Meta-Objects in Assembly Illustrations" ("Katsuma"). Applicants traverse the rejection because Katsuma does not supply the required limitations missing from Kawai. Thus, even if it were obvious to modify the Kawai method in the manner urged by the Office (and applicants are not conceding that it would have been obvious to do so), one would still not have obtained applicants' claimed method. More specifically, Katsuma does not supply, *inter alia*, the creation of process trees (disassembly definition information) in which a user defines the order and direction of disassembling/assembling among other things.

Based on the foregoing reason, the combination does not render claim 13 obvious. Accordingly, applicants request withdrawal of the rejection of claim 13 under 35 U.S.C. § 103(a) over Kawai in view of Katsuma.

Conclusions

Applicants request:

(1)   entry of the amendments to the claims;

(2)   reconsideration and withdrawal of the rejections of the claims; and

(3)   allowance of claims 1, 3, 4, and 6 to 15.

If the Examiner is of a contrary view, the Examiner is requested to contact the undersigned attorney at (404) 459-5642.

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/Wendy A. Choi/
Wendy A. Choi
Registration No. 36,697

WOODCOCK WASHBURN LLP
Cira Centre
2929 Arch Street, 12th Floor
Philadelphia, PA 19104-2891
Telephone: (215) 568-3100
Facsimile: (215) 568-3439